

XLVIII.—*New Fishes from Deep Water off the Coast of Natal.* By C. TATE REGAN, M.A., F.R.S.

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A COLLECTION of fishes received from Messrs. H. W. Bell Marley and Romer Robinson is of considerable interest. The specimens were trawled in rather deep water, 120 to 130 fathoms, 15 to 22 miles off the Umvoti River, Natal. A large proportion of the species are new, and several of the others are new to Natal; their faunal relationship is in many directions, but that with Japan preponderates. The species already known are:—

- Squalus acutipinnis*, Regan.  
*Gonorhynchus gonorhynchus*, Gmelin.  
*Saurida unispinosa*, Richards.  
*Fistularia serrata*, Cuv.  
*Gephyroberyx darwinii*, Johnson.  
*Zeus japonicus*, Cuv. & Val.  
*Antigonia capros*, Lowe.  
*Histioporus spinifer*, Gilchr.  
*Peristedion adeni*, Lloyd.  
*Chaunax pictus*, Lowe.

Of these, *Histioporus spinifer* requires a new description.

*Histioporus spinifer*, Gilchr., 1904.

Depth of body  $1\frac{2}{3}$  in length, length of head nearly 3. Anterior profile less irregular than in *H. typus* and *H. acuti-rostris*, the snout less concave, the interorbital region less prominent. Eye in middle of length of head; diameter 4 in length of head, equal to interorbital width. Maxillary extending to between nostril and eye. 16 gill-rakers on lower part of anterior arch. 60 scales in a longitudinal series. Dorsal IV 26; first spine short; second  $\frac{3}{4}$  diameter of eye; third strong,  $\frac{4}{5}$  length of head; fourth more slender, as long as head; soft fin highest anteriorly, edge nearly straight, posteriorly a little convex. Anal III 10; second spine strongest and longest,  $\frac{3}{5}$  length of head, as long as longest soft rays. Pectoral as long as head; pelvics reaching anal. Caudal slightly emarginate. Traces of broad dark bands across the body.

A specimen of 350 mm.

A second smaller specimen (150 mm.) has the body

deeper (depth  $1\frac{2}{3}$  in length), the anterior profile steeper, and the dorsal fin higher, bearing a considerable general resemblance to the young *H. typus* figured by Kner and Steindachner. Gilchrist's specimen was only 72 mm. (to base of caudal), and had the body still deeper and other juvenile characters.

The following appear to be new to science:—

*Scyliorhinus (Halaelurus) polystigma*, sp. n.

Snout rounded, its præoral length  $\frac{1}{2}$  the distance between outer edges of nasal flaps; latter without cirri, not confluent with upper lip, separated by an interspace equal to twice the length of the posterior edge of either. Mouth  $1\frac{1}{2}$  as wide as long; no labial folds; upper lip not overlapping lower at angles of mouth. Posterior gill-openings smaller and closer together than anterior. First dorsal originating above end of base of pelvics; anterior angle rounded, posterior rectangular; base  $\frac{2}{3}$  distance from second dorsal, which is larger than first and originates above end of base of anal. Length of base of anal  $1\frac{3}{4}$  that of first dorsal,  $1\frac{1}{2}$  that of second,  $\frac{2}{3}$  its distance from caudal. Pectoral rounded, extending nearly  $\frac{3}{4}$  the distance from its origin to that of pelvics, which in the male are united for about the basal third of their posterior edges. Upper surface covered with numerous small rounded spots.

A single specimen, 320 mm. in total length.

Apparently related to *S. buergeri*, Müll. & Henle, from Japan, but resembling the subgenus *Scyliorhinus* in the united pelvic fins.

*Scyliorhinus (Cephaloscyllium) sufflans*, sp. n.

Snout obtusely pointed, its præoral length  $\frac{1}{2}$  the distance between outer edges of nasal flaps; latter without cirri, separated by an interspace which is  $1\frac{1}{2}$  the length of the posterior edge of either and 5 times their distance from edge of lip. Mouth twice as wide as long; no labial folds. Gill-openings subequal; last two closer together than others. First dorsal originating above middle of pelvics; anterior angle rounded, posterior obtuse; base  $1\frac{1}{3}$  that of second dorsal and equal to its distance from that fin, which ends nearly above end of anal. Base of anal nearly equal to that of first dorsal, longer than its distance from caudal. Pectoral with rounded angles, extending not quite  $\frac{1}{2}$  the distance from its origin to that of pelvics. Greyish, without distinct spots or markings.

A single specimen, 750 mm. in total length.

## HETERONARCE, gen. nov.

Differs from *Narcine* in the minute nostrils, the length of the anterior nasal valves, which are confluent to form a curtain that is not much broader than long and is studded with pores, and the lateral position of the posterior nasal valves.

In addition to the species described below, this genus includes *Narcine mollis*, Lloyd (Mem. Ind. Mus. ii. p. 144, pl. xlv. figs. 1, 1 a), from the Gulf of Aden, at 130 fathoms.

*Heteronarce garmani*, sp. n.

Very similar to *H. mollis*, but eyes and spiracles much smaller, snout longer, mouth and nasal valves smaller, and coloration of lower surface different. Spiracles as large as eyes, which can be completely covered by the lower lids; diameter of eye + spiracle  $\frac{3}{5}$  interspiracular width, which is about  $\frac{3}{5}$  length of snout (præocular). Internasal width  $\frac{1}{3}$  length of snout (præoral) or  $\frac{1}{1\frac{1}{2}}$  width of disc; nasal curtain  $\frac{2}{3}$  as long as broad, with straight posterior edge. Brown above; white below.

A single specimen, 170 mm. in total length.

Named in honour of Dr. S. Garman, in recognition of his work on the Selachians.

*Ateleopus natalensis*, sp. n.

Length of head about equal to its distance from origin of anal; length from end of snout to origin of dorsal about  $\frac{1}{5}$ , to origin of anal about  $\frac{1}{3}$  of total length. Snout prominent; eye nearly in middle of length of head, its diameter 7 to 8 in length of head; interorbital width 4 in length of head. Mouth wide; lips smooth or with minute papillæ; lower jaw toothless, included within upper, its length  $\frac{1}{3}$  length of head; angle obtuse, without spine. 10 gill-rakers on lower part of anterior arch. Dorsal 9-10; height equal to length of pectoral. Anal + caudal 104-108. Pectoral  $\frac{2}{3}$  to  $\frac{4}{5}$  length of head, pelvis  $\frac{2}{3}$  to  $\frac{7}{8}$  length of head, slightly expanded distally. Greyish; fins blackish.

Two specimens, 480 and 540 mm. long.

In the larger the length of the pectoral fin is  $\frac{2}{3}$  and that of the pelvic fin  $\frac{7}{8}$  the length of head; in the smaller the pectoral is  $\frac{4}{5}$  and the pelvic  $\frac{2}{3}$  the length of head.

*A. indicus*, Alcock, from the Indian Ocean, is well distinguished by the fewer anal rays (A + C 76-80).

*A. plicatellus*, Gilbert, from Hawaii, is much nearer to *A. natalensis*, but appears to differ in the shorter pelvic fins ( $\frac{2}{5}$  length of head), shorter snout, and wider interorbital region (each a little more than  $\frac{1}{3}$  length of head). Also the lips are said to be finely plicate and the lower jaw to have a spine at the angle.

*A. japonicus*, Schleg., from Japan, has teeth in the lower jaw (in the specimen, 240 mm. long, in the British Museum); distance from snout to origin of dorsal  $\frac{1}{7}$ , to origin of anal  $\frac{2}{7}$ , of total length; snout  $\frac{1}{3}$  head, etc.

*Cælorhynchus denticulatus*, sp. n.

Head as long as distance from isthmus to vent. Snout acutely pointed, with slightly convex edges,  $1\frac{1}{2}$  diameter of eye, which is 4 in length of head; interorbital width  $3\frac{3}{4}$  in length of head. Mouth rather large, its width rather more than  $\frac{1}{2}$  width of head; length of upper jaw a little shorter than snout; maxillary ending below posterior  $\frac{1}{3}$  of eye; barbel nearly as long as eye. Scales with spinules arranged in 10 to 16 parallel series; 4 scales between dorsal fin and lateral line. First dorsal 11-rayed; base a little less than distance from second dorsal. Pectoral  $\frac{1}{2}$  length of head; pelvics 7-rayed, as long as eye. Coloration uniform.

A single specimen, 270 mm. in total length.

*Acropoma cynodon*, sp. n.

Depth of body nearly 4 in length, length of head  $2\frac{3}{4}$ . Snout a little shorter than diameter of eye, which is  $3\frac{1}{3}$  in length of head; interorbital region flattish, its width  $4\frac{1}{3}$  in head. Lower jaw strongly projecting; maxillary with a narrow supplemental bone, ending below middle of eye. None of the teeth depressible; upper jaw with a narrow band of small villiform teeth and a pair of strong anterior canines set well apart; teeth in lower jaw all pointing backwards, uniserial, stronger at the sides than in front, except for a pair of symphyisial canines; small teeth on vomer and a single series on palatines. Præorbital narrow; scaly part of cheek longer than deep. Præoperculum thin, rounded, with serrated edge; operculum with 2 points. Gill-membranes separate; 7 branchiostegals. Gill-rakers long, 16 on lower part of anterior arch. 2 dorsals, almost continuous, with IX, I 10 rays; spines slender; third at least as long as eye, first and ninth  $\frac{1}{3}$  as long; soft fin highest anteriorly. Anal III 7;

third spine longest, as long as eye. Pectoral pointed, upper rays longest, nearly as long as head, reaching origin of anal. Pelvics below pectorals, extending  $\frac{3}{5}$  of distance from their base to anal. Caudal emarginate. Scales thin, cycloid or feebly ctenoid; about 46 in a longitudinal series; lateral line complete, continuous, parallel with dorsal profile, above middle of side until it reaches caudal fin. Colour reddish (?).

A single specimen, 165 mm. in total length.

Near *A. splendens* (*Synagrops splendens*, Lloyd, Mem. Ind. Mus. ii. p. 159, pl. xlvii. fig. 5), from the Gulf of Oman, at 230 fathoms. The anterior canines are stronger than in *A. japonicum*.

*Smaris australis*, sp. n.

Depth of body equal to length of head, 3 in length of fish. Snout as long as eye, 3 in length of head; interorbital width  $3\frac{1}{2}$ . Maxillary extending to vertical from anterior edge of eye. 20 gill-rakers on lower part of anterior arch. 60 scales in a longitudinal series, 6 from origin of dorsal to lateral line. Dorsal XII 9; fourth and fifth spines longest,  $\frac{2}{5}$  length of head; last spine and anterior soft rays  $\frac{2}{7}$ . Anal III 7; second and third spines equal,  $\frac{1}{3}$  length of head. Pectoral as long as head, reaching anal. Caudal forked. Caudal peduncle twice as long as deep. Coloration uniform.

Two specimens, 170 and 220 mm. in total length.

*Chilodactylus brevispinis*, sp. n.

Depth of body 3 in the length, length of head  $3\frac{3}{4}$ . Diameter of eye 4 in length of head, equal to interorbital width, less than length of snout. Maxillary extending to below posterior nostril. 12 gill-rakers on lower part of anterior arch. 52 scales in a longitudinal series, 5 from origin of dorsal to lateral line. Dorsal XVIII 30; spines subequal from fifth, which is nearly  $\frac{1}{4}$  length of head. Anal III 9; second spine longest,  $\frac{1}{3}$  length of head. Pectoral with 6 or 7 simple rays, the uppermost scarcely projecting, the next the longest, as long as head, free for its distal  $\frac{2}{3}$ , reaching vent.

A single specimen, 250 mm. in total length.

*Uranoscopus archionema*, sp. n.

Depth of body equal to distance from chin or snout to posterior edge of occiput, 4 to  $4\frac{1}{2}$  in length of fish. Diameter of eye 4 to 5 in length of head (snout to end of operculum), equal to or a little less than interorbital width. Valve of

lower jaw with a small pointed median projection. Bones of upper surface of head rough, with blunt ridges; depth of suborbital equal to that of naked area below it; præorbital with one or two blunt spines; 1 subopercular and 4 or 5 præopercular spines; 2 divergent supraclavicular spines, the inner short; humeral spine  $\frac{1}{3}$  to  $\frac{2}{7}$  length of head. 52 to 56 oblique series of scales from behind humeral spine to caudal. Dorsal IV 13; spines flexible; fourth soft ray longest,  $\frac{2}{5}$  to  $\frac{1}{2}$  length of head. Anal 13; base as long as its distance from hind end of base of pelvis; last ray nearly reaching caudal. Pectoral 17, as long as caudal,  $\frac{4}{5}$  head. Greyish or brownish, with or without numerous rounded pale spots; spinous dorsal blackish.

Two specimens, 130 and 280 mm. long.

There are two other South-African examples of *Uranoscopus* in the British Museum—one from Mossel Bay and the other from off the Tugela River, 64 to 73 fathoms. These have been determined as *U. occidentalis*, Agass., a species unsatisfactorily described as from the Atlantic, and probably a synonym of *U. scaber*. The Tugela specimen is *U. archionema*, but the one from the Cape seems to belong to a new species\*.

*Sirembo (Haplobrotula) gnathopus*, sp. n.

Depth of body nearly equal to length of head, which is 5 in length of fish and equal to its distance from origin of anal; distance from end of snout to origin of dorsal 4 in length of fish. Snout obtuse, a little shorter than diameter of eye, which is  $4\frac{1}{3}$  in length of head and equal to interorbital width. Upper surface of head naked; cheeks and opercles scaly. Lower jaw included; maxillary extending beyond eye, the width of its distal end equal to length of snout. Præoperculum with 3 spines. 13 gill-rakers on lower part of anterior arch; posterior rather long, anterior small tubercles. Lateral line complete and continuous; 8 or 9 scales between it and origin of dorsal. Dorsal 105, scaleless; origin above anterior  $\frac{1}{3}$  of pectoral. Anal 85. Pectoral  $\frac{2}{3}$  length of head. Pelvis

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*Uranoscopus haplostoma*, sp. n.

Near *U. archionema*, but mandibular valve with regular margin, without trace of lobe or filament; suborbital deeper than naked part of cheek; humeral spine  $\frac{1}{4}$  head; third ray of soft dorsal longest; base of anal as long as its distance from spines on pelvis. D. 1V, 13. A. 14. Sc. 56.

Total length 180 mm.

Mossel Bay, S. Africa.



$\frac{1}{2}$  length of head, inserted at middle of length of lower jaw, below anterior  $\frac{1}{4}$  of eye. Greyish; vertical fins blackish posteriorly.

A single specimen, 300 mm. in total length.

*Parabembras robinsoni*, sp. n.

Depth of body 5 in length, length of head (to end of opercular flap)  $2\frac{1}{2}$ . Snout as long as diameter of eye, which is  $3\frac{3}{4}$  in length of head and 4 times interorbital width. Teeth small, villiform, in bands in jaws and on vomer and palatines; lower jaw projecting; maxillary not quite reaching to below middle of eye. A lateral series of 6 spines, 1 præorbital, 3 suborbital, and 2 præopercular; supraorbital margin with about 15 serrations. Dorsals X, I 9; fourth to sixth spines longest, a little longer than diameter of eye. Anal III 5; second spine longest, a little shorter than diameter of eye. Pectoral 19-rayed,  $\frac{2}{3}$  length of head; pelvics  $\frac{1}{3}$  length of head. Caudal subtruncate. 40 scales in lateral line, which is nearly parallel to dorsal profile, reaching middle of side on caudal peduncle. Coloration pale, uniform.

A single specimen, 240 mm. long.

*P. curtus*, Schleg., from Japan, as described and figured, appears to differ in having fewer and stronger supraorbital serrations, only one præopercular spine in line with the suborbitals, but two additional spines below it, spinous dorsal fin more elevated, etc.

*Cynoglossus (Trulla) marleyi*, sp. n.

Depth of body nearly 4 in the length, length of head  $5\frac{1}{4}$ . Snout obtusely pointed, as long as postorbital part of head. Eyes close together, upper further forward than lower; diameter 8 in length of head. Apparently only one nostril on left side, in front of lower eye. Angle of mouth below posterior edge of lower eye, considerably nearer to gill-opening than to end of snout. Scales ctenoid; 130 in a longitudinal series; 3 lateral lines on left side; 20 scales between upper and middle lateral lines. Dorsal 130. Anal 110. Brownish; fins blackish.

A single specimen, 340 mm. long.

*Chirolophius insidiator*, sp. n.

Disc longer than broad,  $\frac{1}{2}$  length of fish. Snout  $1\frac{1}{2}$  diameter of eye, which is 5 in length of head and equal to interorbital width. Præmaxillaries with two series of depressible

teeth anteriorly and one series of small fixed teeth laterally. Spines on head as in other species of the genus. Humeral spine bifid. Dorsal VI, 8; first spine ending in a flap, when laid back reaching posterior edge of eye; second longer; third longest,  $\frac{3}{4}$  length of head. Anal 6. Pectorals 18-rayed. Greyish; exposed part of tongue mottled; inside of mouth otherwise unpigmented; lower surface of pharynx, behind the branchial region, blackish.

Two specimens, 120 and 160 mm. in total length.

Near *C. gracilimanus*, Alcock, which differs in having the second dorsal spine longest, at least  $\frac{3}{4}$  the length of the disc.

• *Halieutea liogaster*, sp. n.

Disc broader than long, its length nearly twice length of tail (without caudal fin). Upper surface with strong scattered spines, mostly 4-rooted; marginal spines bifid or multifid; no small spines and no granules. Lower surface smooth except for a submarginal series of spines. Diameter of eye  $6\frac{1}{2}$  to  $7\frac{1}{2}$  in length of disc, equal to or a little less than interorbital width; orbital margins raised. Rostral tentacle 3-lobed, the lower lobes fringed below; anterior edge of roof of tentacle-chamber posterior to edge of disc. Width of mouth  $\frac{2}{5}$  width of disc. Dorsal with 5 rays, anal with 4, pectoral with 14. Anal, when laid back, not nearly reaching caudal, which is as long as pectoral,  $\frac{2}{3}$  length of fish (without caudal). Greyish; part of upper surface with dark markings forming a large meshed reticulation.

Two specimens, 93 and 160 mm. long.

This species is very similar to the Japanese *H. stellata*, Wahl, which has the skin granular and some small spines between the large ones.

The following is from water of less depth:—

*Pagellus microlepis*, sp. n.

Depth of body  $2\frac{1}{2}$  in the length, length of head 3. Snout a little shorter than diameter of eye, which is 3 in length of head and equal to interorbital width. Upper surface of head naked except for a band of scales on each side from operculum to occiput; 8 horizontal series of scales on cheek. Teeth in rather broad bands, outer acute, anteriorly somewhat enlarged, inner obtusely conical or molariform. Maxillary extending to below posterior nostril; præorbital narrow, the distance



from eye to end of maxillary  $\frac{2}{3}$  diameter of eye. 17 gill-rakers on lower part of anterior arch. 90 scales in lateral line, 15 between anterior dorsal spines and lateral line. Dorsal XI 12; spines slender, fourth longest, a little more than  $\frac{1}{2}$  length of head; soft rays gradually decreasing in length posteriorly, the first nearly  $\frac{2}{3}$  length of head. Anal III 10; third spine longest, as long as soft rays,  $\frac{1}{3}$  length of head. Pectoral as long as head, reaching anal. Caudal forked. Greyish silvery; dorsal, anal, and pelvic fins blackish; a black band across anterior part of interorbital region.

A single specimen, 195 mm. long, taken at a depth of 25 fathoms.

XLIX.—*Exotic* Muscaridæ (*Diptera*).—II.\*

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ASIATIC SPECIES.

Family Tachinidæ.

Genus XENOTACHINA, nov.

*Generic characters*.—Fourth wing-vein continued to margin in an almost straight line, not curved forward; arista plumose; all wing-veins without setulæ; abdomen cylindrical, slightly tapered to apex, the tergites slightly overlapping sternites and with strong macrochætæ at apices; eyes of male widely separated, all frontal bristles except the upper supraorbital directed mesad; ocellar and post-ocellar bristles very small and weak; palpi normal; proboscis short and fleshy; sternopleural bristles 3, in an equilateral triangle; prosternum, pteropleura, and basal abdominal sternite bare; hypopleura with about four weak bristles in a vertical series in front of and slightly below the spiracle, the latter with some marginal hairs.

Genotype, the following species.

*Xenotachina pallida*, sp. n.

*Male*.—Pale yellowish testaceous. Ocellar triangle, a patch on each side of upper half of occiput, and a poorly

\* For Part I., see Ann. & Mag. Nat. Hist. (9) vii., Feb. 1921, pp. 161-173.